

"To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one having ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or the references when combined) must teach or suggest all the claim limitations." MPEP §2142, citing, *In re Vaeck*, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Amended Claim 12 recites, "a detection stop (12) defining a first optical reference point and a second optical reference point wherein an entire beam path is defined by said first optical reference point and said second optical reference point." Ellis discloses a microscope that contains fewer parts than the conventional microscope, to reduce the number of parts that must be aligned. Column 1, lines 49-52. Gamble discloses a resonance contact scanning force microscope with an adjustable light source. Neither reference discloses the above-quoted element. Since the references do not teach or suggest all the claim limitations, Claim 12 would not have been obvious to one having ordinary skill in the art in light of the cited references.

Amended Claim 12 recites, "said light source is alignable with respect to said first and second reference points." Ellis does not disclose that the light source 51 can be adjusted in any manner to align the components of the microscope. The Examiner has cited Gamble as teaching an adjustable light source. However, there is no teaching, suggestion, or motivation in Gamble for a light source alignable with respect to two reference points defined by a detection stop, as claimed in Claim 12. Further, there is no teaching, suggestion, or motivation in either reference to combine their teachings to create the invention claimed in Claim 12. Thus, Claim 12 would not have been obvious to one having ordinary skill in the art at the time the invention was made in light of the cited references.

Claims 13-18, 20-22, 24-27, and 34-35 depend from Claim 12, which, as discussed above, is patentable in light of the cited references. Thus, Claims 13-18, 20-22, 24-27, and 34-35 are also patentable in light of the cited references.

Claim 30 recites, “a detection stop (12) defining a first optical reference plane and a second reference plane wherein an entire beam path is defined as perpendicular to said first optical reference plane and said second optical reference plane and through a center of said detection stop.” Neither Ellis nor Gamble teach, suggest, or motivate this element. Similar to the discussion above with respect to Claim 12, there is no teaching, suggestion, or motivation in either cited reference for a light source alignable with respect to the two reference planes defined by a detection stop, as claimed in Claim 30. Further, there is no teaching, suggestion, or motivation in either cited reference to combine their teachings. Thus, Claim 30 would not have been obvious to one having ordinary skill in the art in light of the cited references.

Claims 19 and 31 are dependent from Claim 30. Since Claim 30 is patentable over the cited references, Claims 19 and 31 are also patentable over the cited references.

The Section 103 Rejection of Claims 1-11, 23, 28, 29, 32, and 33

The Examiner rejected Claims 1-11, 23, 28, 29, 32, and 33 under 35 U.S.C. §103(a) as unpatentable over United States Patent No. 5,035,476 (Ellis et al.) in view of United States Patent No. 5,691,987 (Gamble) and further in view of United States Patent No. 5,214,492 (LoBianco et al.). To the extent the rejection applies to amended Claim 1, Applicant traverses the rejection and respectfully requests reconsideration.

Amended Claim 1 recites, “carrying out an iterative alignment of the light source until the entire beam path is between said first optical reference point and said second optical

reference point.” LoBianco discloses an apparatus for aligning apertures with a light beam by rotating the sample surface. There is no teaching, suggestion, or motivation for moving the light source. There is no teaching, suggestion, or motivation in any of the cited references of the above-quoted element. Further, there is no teaching, suggestion, or motivation in any of the reference to combine their teachings to create an iterative method for aligning components in a microscope by adjusting the light source. Thus, Claim 1 would not have been obvious to one having ordinary skill in the art at the time the invention was made in light of the cited references.

Claims 2-3, 5-11, and 32-33 depend from Claim 1. Since Claim 1 is patentable over the cited references, Claims 2-3, 5-11, and 32-33 are also patentable over the cited references.

Claim 23 is dependent from Claim 12. Since Claim 12 is patentable over cited references, Claim 23 is also patentable over the cited references.

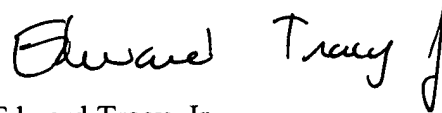
Claim 28 recites, “carrying out an iterative alignment by adjusting the configuration of the light source until the entire beam path is perpendicular to said first optical reference plane and said second optical reference plane and through a center of said detection stop.” As stated above with respect to Claim 30, there is no teaching of any kind in any of the references for a method to align optical components in a microscope by adjusting the light source with respect to two reference planes defined by a detection stop. Thus, Claim 28 would not have been obvious to one having ordinary skill in the art at the time the invention was made in light of the cited references.

Claims 4 and 29 are dependent from Claim 28. Since Claim 28 is patentable over the cited references, Claims 4 and 29 are also patentable over the cited references.

Conclusion

For all of the reasons outlined above, Applicant respectfully submits that all pending claims are patentable and in condition for allowance, which action is courteously requested.

Respectfully submitted,

A handwritten signature in black ink that reads "Edward Tracy, Jr." with a stylized flourish at the end.

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EWT
July 16, 2003

MARKED VERSION OF AMENDED CLAIMS

1. A method for aligning the optical beam path of a microscope, having a light source (1), a microscope optical system, a detection stop (12), and a detection device (13), wherein the method comprises the steps of:

- a) providing a center of the detection stop (12) as a first optical reference point;
- b) providing a second optical reference point wherein an entire beam path is defined by said first optical reference point and said second optical reference point; and,
- c) carrying out an iterative alignment [by adjusting the configuration] of the light source until the entire beam path is between said first optical reference point and said second optical reference point.

12. A microscope assemblage, having a light source (1), a microscope optical system, a detection device (13), a detection stop (12) defining a first optical reference point and a second optical reference point wherein an entire beam path is defined by said first optical reference point and said second optical reference point, and said light source is [operatively arranged to be adjusted in configuration] alignable with respect to said first and second reference points.